

**DEPARTMENT OF THE INTERIOR****Fish and Wildlife Service****50 CFR Part 17****Endangered and Threatened Wildlife and Plants; Emergency Determination of Endangered Status and Critical Habitat for the Borax Lake Chub**

**AGENCY:** Fish and Wildlife Service, Interior.

**ACTION:** Emergency rule.

**SUMMARY:** The Service determines the Borax Lake chub to be an Endangered species and Borax Lake, Harney County, Oregon to be its Critical Habitat. This action is being taken because the distribution of the Borax Lake chub is limited to Borax Lake, its outflow, and Lower Borax Lake in Harney County, Oregon. Geothermal development in and around Borax Lake and human modification of the lake threaten the integrity of the species' habitat and, hence, its survival. This emergency rule would provide protection to this species for 240 days.

**DATES:** This emergency determination will be effective on May 28, 1980, and remain in effect until January 23, 1981.

**ADDRESSES:** Interested persons or organizations can obtain information from the Regional Director, U.S. Fish and Wildlife Service, Lloyd 500 Building, Suite 1692, 500 N.E. Multnomah Street, Portland, Oregon 97232.

**FOR FURTHER INFORMATION CONTACT:** For further information on this emergency rule contact Mr. John L. Spinks, Jr., Chief, Office of Endangered Species, U.S. Fish and Wildlife Service, Department of the Interior, Washington, D.C. 20240 or phone (703/235-2771).

**SUPPLEMENTARY INFORMATION:**

**Background**

The Borax Lake chub is found only in Borax Lake (a small 10.2-acre, natural, thermal lake), its outflow, and Lower Borax Lake located in the Alvord Basin of south-central Oregon. It inhabits the highly mineralized, thermal lake that is fed by a thermal spring. The fish feeds on a variety of aquatic invertebrates.

Over time, the precipitation of minerals from the spring water maintaining the level of Borax Lake has raised the perimeter of the lake approximately eight meters above the valley floor and isolated the chub from the surrounding watershed. The perched nature of the lake compared to the surrounding land makes it extremely susceptible to human disturbance. Present modification of the perimeter diverts water from the lake and lowers

its level. The lowering levels adversely affect the chub by decreasing habitat and increasing water temperatures.

A second major threat to the Borax Lake chub is geothermal development. The entire Alvord Basin is a known Geothermal Resource Area (KGRA) within which the Bureau of Land Management has already leased rights for geothermal exploration to private oil and geothermal companies. Such development adjacent to Borax Lake could adversely impact the species' habitat. The problem is that exploratory drilling by various companies under certain circumstances, cause interconnections between aquifers or springs where one of the aquifers might be that which feeds the warm lake in which the chub lives. This kind of interconnection could, in effect, drain the lake which is at a higher elevation than the valley floor where much of the drilling will be occurring. This drilling might hit the hot water aquifer servicing the lake and thus change the aquifer either through pressure or temperature changes and consequently change the lake. This alteration could range from a simple change in the temperature to a complete elimination of the flow.

The Critical Habitat encompasses 3,840 acres, of which 360 are privately owned. The remaining 3,480 acres are Federally owned (Bureau of Land Management).

Section 4(a) of the Act (16 U.S.C. 1531 et seq.) states:

General—(1) The Secretary shall by regulation determine whether any species is an endangered species or a threatened species because of any of the following factors:

- (1) The present or threatened destruction, modification, or curtailment of its habitat or range;
- (2) overutilization for commercial, sporting, scientific, or educational purposes;
- (3) disease or predation;
- (4) the inadequacy of existing regulatory mechanisms; or
- (5) other natural or man-made factors affecting its continued existence.

This authority has been delegated to the Director.

#### Summary of Factors Affecting the Species

These findings are summarized herein under each of the five criteria of Section 4(a) of the Act. These factors, and their application to the Borax Lake chub, are as follows:

1. *The present or threatened destruction, modification, or curtailment of its habitat or range.*—The Borax Lake chub is endemic to Borax Lake and its outflow. Borax Lake is an extremely fragile aquatic ecosystem which,

because of its position above the valley floor, is vulnerable to destruction by human modification for irrigation. Recently a number of channels have been chipped along its perimeter. These channels direct water toward the eastern side of the lake instead of allowing the outflow to follow its natural pathway toward a marsh located on the western side of the lake. If flows through the natural outlet are sufficient, water flows through the marsh and into Lower Borax Lake where it provides additional chub habitat. Because of the artificial diversion, the lower lake is not completely dry during most years. Historically, because of its intermittent nature, the lower lake has probably never provided permanent chub habitat.

In contrast, much of the marsh area retains permanent water and provides suitable chub habitat. Much of this marsh habitat currently is dry because of the unnatural water diversion from the upper lake. If more diversions are constructed in the lake perimeter, the lake level will continue to decline, the marsh will continue to dry, and the continued existence of the chub will be increasingly threatened.

Development of the geothermal resource poses a substantial threat which may adversely affect the Borax Lake chub by modifying or destroying its aquatic habitat. Considerable interest in geothermal exploration has been demonstrated in the Alvord Basin, an area designated by the U.S. Geological Survey as a known Geothermal Resource Area because of its geothermal potential. Some geothermal leases in the basin have already been issued by the Bureau of Land Management. The private land on which Borax Lake is located has been leased to an oil company for geothermal development. Additional leasing of Federal land in the Critical Habitat area is scheduled. The original leases released by BLM were offered in 1975 and there have been a number of offers since. Some of these leases have been reoffered, most recently in April of 1980. Some leases have been issued and three tracts are presently pending. Although BLM has indicated that it will be anywhere from 4–6 months before exploratory drilling actually begins, processing of applications for drilling permits and of BLM stipulations to drilling plans will be taking place in the near future. This listing is necessary if BLM is expected to consider the welfare of this species during its deliberations.

Development of a hot springs resort at Borax Lake for recreational purposes has been considered by the land owner,

but because of the lakes remoteness this appears unlikely.

2. *Overutilization for commercial, sporting, scientific or educational purposes.*—None.

3. *Disease or predation.*—None.

4. *The inadequacy of existing regulatory mechanism.*—None.

5. *Other natural or man-made factors affecting its continued existence.*—None.

#### Critical Habitat

The Act defines "Critical Habitat" to include (a) areas within the geographical area occupied by the species at the time that species is listed which are essential to the conservation of the species and which may require special management considerations or protection and (b) specific areas outside the geographic area occupied by the species at the time, upon a determination by the Secretary that such areas are essential for the conservation of the species.

Critical Habitat for the Borax Lake chub is as follows: Oregon, Harney County, Borax Lake and outflow from Borax Lake located within Sections 10, 11, 14, 15, 22, 23; T37S R33E.

These areas provide the Borax Lake chub with all the necessary requirements for suitable survival and reproduction such as food, spawning habitat, water temperatures, etc. Additional land is provided as a buffer zone around the aquatic habitat to insure its integrity.

Section 4(b)(4) and 4(f)(4) of the Act require, to the maximum extent practicable, that Critical Habitat determinations be accompanied by a brief description and evaluation of those activities which, in the opinion of the Secretary, may adversely modify such habitat if undertaken, or those Federal actions which may be impacted by such designation. Such activities are identified below for this species. It should be emphasized that Critical Habitat designation may not affect each of the activities listed below, as Critical Habitat designation only affects Federal agency activities through Section 7 of the Act.

Activities which occur within the proposed Critical Habitat include cattle grazing, nature study, swimming, geothermal exploration, irrigation, and hunting. Of these activities grazing, hunting, nature study, and swimming do not appear to adversely modify the habitat, to any substantial degree.

Geothermal exploration may adversely modify the habitat should it occur within the area adjacent to Borax Lake, its outflows, and Lower Borax Lake or modify the spring flow and/or its water temperature.

Such disturbances from geothermal development would include, but would not be limited to, subsidence problems and/or modifications in the hydrology of the area that may affect the springs supporting Borax Lake. Full scale development of a geothermal plant may have negative effects on the lake due to air pollution, possible ground contamination, subsidence, and other related impacts. If geothermal development occurs in the Alvord Basin (and no plant construction is now known to be scheduled), it will probably entail only small-scale plants.

Construction of such plants on Federal land may be restricted so as not to adversely affect the proposed Critical Habitat. Development on private land could proceed unencumbered provided no Federal approval or funding is involved.

#### Effect of the Rule

Endangered Species regulations already published in Title 50 17.21 of the Code of Federal Regulations set forth a series of general prohibitions and exceptions which apply to all Endangered species. The regulations referred to above which pertain to such species are summarized below.

With respect to the Borax Lake chub, all prohibitions of Section 9(a)(1) of the Act, as implemented by 50 CFR 17.21, will apply. These prohibitions, in part, would make it illegal for any person subject to the jurisdiction of the United States to take, import or export, ship in interstate commerce in the course of a commercial activity, or sell or offer for sale this species in interstate or foreign commerce. It also would be illegal to possess, sell, deliver, carry, transport, or ship any such wildlife which was illegally taken. Certain exceptions would apply to agents of the Service and State conservation agencies.

Regulations published in the *Federal Register* of September 26, 1975, (40 FR 44412), codified at 50 CFR 17.22 and 17.23, provided for the issuance of permits to carry out otherwise prohibited activities involving Endangered species under certain circumstances. Such permits are available for scientific purposes or to enhance the propagation or survival of the species. In some instances, permits may be issued during a specified period of time to relieve undue economic hardship which would be suffered if such relief were not available.

This rule requires Federal agencies

not only to insure that activities they authorize, fund, or carry are not likely to jeopardize the continued existence of the Borax Lake chub, but also requires them to insure that their actions are not likely to result in the destruction or adverse modification of the Critical Habitat which has been determined by the Secretary. Provisions for Interagency Cooperation are codified at 50 CFR Part 402.

Pursuant to Section 4(b) of the Act, the Director will notify the Governor of Oregon with respect to this emergency rule.

The primary authors of this rule are Dr. Kathleen E. Franzreb, U.S. Fish and Wildlife Service, Endangered Species Office, 2800 Cottage Way, Sacramento, California 95825 (FTS 468-4106 or area code 916/484-4106) and Dr. James D. Williams, U.S. Fish and Wildlife Service, Office of Endangered Species, Washington, D.C. 20240 (FTS 235-1975 or 703/235-1975).

#### Regulations Promulgation

Section § 17.11 is amended by adding in alphabetical order, the following to the list of animals.

#### § 17.11 Endangered and threatened wildlife.

Species		Historic range	Vertebrate population where endangered or threatened	Status	When listed	Critical habitat	Special rules
Common name	Scientific name						
Fish:							
Chub, Borax Lake .....	<i>Gila</i> sp .....	U.S.A. (Oregon)	Entire.....	E	.....	17.95(e)	NA

#### § 17.95 [Amended]

50 CFR 17.95(e), fishes, is amended for 240 days by adding Critical Habitat of the Borax Lake chub after that of the slender chub as follows:

**Borax Lake Chub**  
(*Gila sp.*)

Oregon, Harney County. Borax Lake and outflow from Borax Lake located within Sections 10, 11, 14, 15, 22, 23; T37S R33E.

Dated: May 21, 1980.

**Lynn A. Greenwalt,**  
*Director, Fish and Wildlife Service.*

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